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			EXAMINER JOYNER, KEVIN	
			ART UNIT 1744	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,107	<b>Applicant(s)</b> TUFO, JOSEPH	
	<b>Examiner</b> Kevin C. Joyner	<b>Art Unit</b> 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 35-78 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/3/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 35, 36, 55, 57, 58, 60, 76, and 78 are rejected under 35 U.S.C. 102(e) as being anticipated by Palestro et al. (U.S. Patent No. 6,497,840).

Palestro discloses an apparatus for cleaning air, the apparatus comprising a chamber having an inlet and an outlet, through which air to be cleaned is passable (Figures 1-6), a plurality of UV light sources (152) to irradiate the interior of the chamber and one or more UV transmissible shield members isolating the UV light sources (160), in use, from the air to be cleaned and wherein at least some of the UV light sources are mounted on a common mounting means (154) such that said some of the UV light sources are removable together from the apparatus (column 6, lines 18-50; column 8, lines 20-45). Concerning claim 36, the reference continues to disclose a filter means (60) located upstream of said UV light sources as shown in Figure 2.

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Regarding claims 55 and 57, the reference discloses that the UV transmissible shield member provides at least part of a boundary that is a wall of the chamber that defines the flow path of the air to be cleaned, wherein the UV light sources are located outside of the to-be-cleaned air flow path in Figure 2. Regarding claims 58 and 60, Palestro also discloses that the UV light source is located adjacent a reflective surface to reflect impinging UV radiation into the chamber (column 9, lines 23-35). More specifically, all the walls inside the chamber reflect UV light, wherein Palestro specifically discloses that the upper inclined portion (188) and inclined forward portion (198) reflect UV light. As shown in Figure 2, both portions are adjacent to the UV light sources.

Regarding claim 61, the reference also discloses that said one or more walls (196 and 198) comprising a UV reflective surface may be shaped to present a concave surface as viewed from the major axis of the flowing air as shown in Figure 2. Concerning claim 76, the reference continues to disclose a portable air cleaning unit (as shown in Figure 4), wherein an air movement means is operable to cause air to flow from the inlet to the outlet of the air cleaning apparatus (column 9, lines 45-55). Concerning claim 78, the reference also discloses a method of cleaning air comprising moving air through the air cleaning apparatus as claimed in claim 35 and expelling cleaned air (column 9, lines 45-55).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 37-49, 62, 67-69 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387).

Palestro discloses an apparatus for cleaning air, the apparatus comprising a chamber having an inlet and an outlet, through which air to be cleaned is passable (Figures 1-6), a plurality of UV light sources (152) to irradiate the interior of the chamber and one or more UV transmissible shield members isolating the UV light sources (160), in use, from the air to be cleaned (column 6, lines 18-50; column 8, lines 20-45) and filter means (60) upstream of the or each UV light source as shown in Figure 2. Palestro does not appear to disclose that upstream of said filter means is an air flow equalizing means which, in use, is capable of ensuring that the flow of air through said filter means is substantially constant across the area of said filter means. Bigelow discloses an apparatus for cleaning air comprising a chamber with an inlet and outlet, said chamber further comprising UV light sources (50) and filter means (22 and 20) in column 5, lines 23-36 and column 15, lines 32-42. The reference continues to disclose that upstream of said filter means is located an air flow equalizing means (22 and 46) which, in use, is

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capable of ensuring that the flow of air through said filter means is substantially constant across the area of said filter means as shown in Figure 6. More specifically, as broadly defined, the fan (46) provides constant air flow while the coarse mesh filter (22) separates it across the area of the filter means (20). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include the air flow equalizing means of Bigelow which, in use, is capable of ensuring that the flow of air through said filter means is substantially constant across the area of said filter means in order to provide for the airflow through the device at a constant rate. Concerning claim 38, Bigelow continues to disclose that at least the downstream surface of said air flow equalizing means is at least partially UV reflective in column 11, lines 40-50. More specifically, a portion of the equalizing means (22) is made from polished aluminum, which reflects UV light. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include the air flow equalizing means of Bigelow which, in use, is capable of ensuring that the flow of air through said filter means is substantially constant across the area of said filter means in order to provide for the airflow through the device and prevent UV radiation from exiting outside of the chamber. Concerning claims 39 and 40, the limitations are met with respect to claims 37 and 38 above. Therefore, the explanation is relied upon as necessary.

Regarding claims 41, 43 and 45, Bigelow continues to disclose that said air flow equalizing means comprises a plural layered structure with each layer comprising a plurality of angled flow paths (Figures 6 and 10; column 11, lines 40-50). More

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specifically, the coarse mesh layer (22) is wavy aluminum strands weave. The weave of the aluminum strands provides a plurality of layers, and as shown in Figure 10, the flow paths are angled. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include an air flow equalizing means comprising a plurality of layers with each layer comprising a plurality of angled flow paths in order to capture and subsequently irradiated large particulates as exemplified by Bigelow.

Claim 42 further requires that the angle of the air flow paths is about  $45^{\circ}$  to the major flow axis of air passing through the apparatus. It would have been well within the purview of one of ordinary skill in the art to optimize the angle of the air flow paths in order to maximize the capture of large particulates. Only the expected results would be attained. Regarding claim 44, Bigelow also discloses that the flow paths of adjacent layers of said air flow equalizing means are not parallel and are capable of encouraging air flowing therethrough to adopt a tortuous flow path as shown in Figure 6. More specifically, the combination of the fan (46) and the coarse mesh provide a tortuous flow path for the flowing of air therethrough, and the fan and coarse mesh provides a equalizing means that is not parallel as shown in Figures 6 and 10. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include the air flow equalizing means of Bigelow that is not parallel and therefore capable of encouraging a tortuous flow path for air flowing through in order to provide an equalizing means that distributes air throughout the apparatus and captures large particulates.

Regarding claims 46-48, Palestro continues to disclose that the UV transmissible shield member is made from a suitable material to handle UV transmission (column 8, lines 30-40). Concerning claim 49, Palestro continues to disclose the teaching of utilizing a UV lamp that emits light in the UV-C band (column 3, lines 55-60). Regarding claim 62, Palestro does not appear to disclose that the chamber further comprises a filter means situated across the outlet. Bigelow continues to disclose that the chamber further comprises a filter situated across the outlet in order to ensure that the outgoing air is completely clean as shown in Figures 5 and 6. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include a filter situated across the outlet in order to ensure that the outgoing air is completely clean as exemplified by Bigelow.

Concerning claims 67-69, Palestro does not appear to disclose that the apparatus further comprises a component made of a material, which releases hydroxyl radicals. Bigelow continues to disclose that the apparatus further comprises a component made of a material which releases hydroxyl radicals due to its destructive nature to dust and microorganisms (column 7, lines 62-66; column 14, lines 29-50). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to further comprise a component made of a material which releases hydroxyl radicals in order to take advantage of its destructive nature against dust and microorganisms as exemplified by Bigelow. Regarding claim 77, Palestro continues to disclose a portable air cleaning unit (as shown in Figure 4),



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wherein an air movement means is operable to cause air to flow from the inlet to the outlet of the air cleaning apparatus (column 9, lines 45-55).

5. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Wedekamp (U.S. Patent No. 4,948,980).

Palestro is relied upon as set forth in reference to claim 35 above. Palestro does not appear to disclose that the UV light sources are of non-circular cross-sectional shape. Wedekamp discloses an apparatus for irradiating a fluid with a UV light source (column 1, lines 5-10). The reference continues to disclose that the light source is of non-circular cross sectional shape in order to provide pronounced radiation characteristics (column 1, lines 45-62). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include UV light sources that are of non-circular cross-sectional shape in order to provide pronounced radiation characteristics as exemplified by Wedekamp.

6. Claims 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claims 37 and 39 above, and further in view of Wedekamp (U.S. Patent No. 4,948,980).

Palestro in view of Bigelow is relied upon as set forth in reference to claims 37 and 39 above. Palestro in view of Bigelow does not appear to disclose that the UV light sources are of non-circular cross-sectional shape. Wedekamp discloses an apparatus for irradiating a fluid with a UV light source (column 1, lines 5-10). The reference continues to disclose that the light source is of non-circular cross sectional shape in

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order to provide pronounced radiation characteristics (column 1, lines 45-62). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to include UV light sources that are of non-circular cross-sectional shape in order to provide pronounced radiation characteristics as exemplified by Wedekamp.

7. Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840).

Palestro is relied upon as set forth in reference to claim 35 above. Palestro does not appear to specifically disclose the wattage of the UV light sources. However, it would have been well within the purview of one of ordinary skill in the art to optimize the mean level of radiation in order to maximize the efficiency and effectiveness of the sterilization in the chamber. Only the expected results would be attained.

8. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Roberts (U.S. Patent No. 6,039,928).

Palestro is relied upon as set forth in reference to claim 55. Palestro does not appear to disclose that the UV transmissible shield member is a tube mounted within the chamber, the air to be cleaned being flowable through the tubular shield member; the UV light sources being located between the chamber wall and the shield member. Roberts discloses an apparatus capable of cleaning air that comprises a chamber (50) comprising a transmissible shield member (54) and a plurality of UV light sources to irradiate the interior of the chamber as shown in Figure 2. The reference continues to disclose that the UV transmissible shield member (54) is a tube mounted within the

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chamber (50), the air to be cleaned being flowable through the tubular shield member, the UV light sources being located between the chamber wall and the shield member in order to irradiate the contaminated area from various angles as shown in Figure 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to comprise the UV transmissible shield member as a tube mounted within the chamber, the air to be cleaned being flowable through the tubular shield member, and the UV light sources being located between the chamber wall and the shield member in order to irradiate the contaminated area from various angles as exemplified by Roberts.

9. Claims 35, 59 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew et al. (U.S. Patent No. 4,766,321) in view of Palestro et al. (U.S. Patent No. 6,497,840).

Lew discloses an apparatus capable of cleaning air, the apparatus comprising a chamber having an inlet and an outlet, through which air to be cleaned is passable, a plurality of UV light sources (11 and 12) to irradiate the interior of the chamber and one or more UV transmissible shield members (9 and 10) isolating the UV light sources, in use, from the air to be cleaned, wherein the shield member comprises one or more tubes which extend across the chamber, a UV light source being mounted within the or each tubular UV transmissible shield members (concerning claim 59) as disclosed in Figures 1 & 2 and column 2, lines 17-50. Lew does not appear to disclose that at least some of the UV light sources are mounted on a common mounting means such that said some of the UV light sources are removable together from the apparatus. Palestro

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discloses an apparatus for cleaning air, the apparatus comprising a chamber having an inlet and an outlet, through which air to be cleaned is passable (Figures 1-6), a plurality of UV light sources (152) to irradiate the interior of the chamber and one or more UV transmissible shield members isolating the UV light sources (160), in use, from the air to be cleaned. The reference continues to disclose that at least some of the UV light sources are mounted on a common mounting means (154) such that said some of the UV light sources are removable together from the apparatus (column 6, lines 18-50; column 8, lines 20-45) in order to remove more than one light source at a time for replacement. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Lew to include a common mounting means such that said some of the UV light sources are removable together from the apparatus in order to remove more than one light source at a time for maintenance or replacement as exemplified by Palestro.

10. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claim 62 above, and further in view of Reisfeld et al. (U.S. Patent No. 6,884,399).

Palestro in view of Bigelow is relied upon as set forth in reference to claim 62 above. Palestro in view of Bigelow does not appear to disclose that said outlet filter means is a HEPA filter. However, the utilization of HEPA filters in an apparatus for the cleaning of air is extremely well known. Reisfeld discloses an apparatus for the cleaning of air comprising a chamber, an inlet and an outlet and a filter as shown in

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Figures 1-5. The reference continues to disclose that it is extremely well known to utilize a HEPA filter in an apparatus for cleaning air in column 1, lines 18-25. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro in view of Bigelow to utilize a HEPA filter as the outlet filter, as such filters are extremely well known in the art as exemplified by Reisfeld.

11. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claim 62 above, and further in view of Hashizume (U.S. Patent No. 6,773,609).

Palestro in view of Bigelow is relied upon as set forth in reference to claim 62 above. Palestro in view of Bigelow does not appear to disclose that the outlet filter means comprises a combustible frame made of wood. However, comprising a portion of a filtering means out of wood is well known in the art of filtration. Hashizume discloses an example of this in an apparatus for cleaning a fluid, comprising a chamber with an inlet and outlet, a UV radiation source and a filtering means (abstract). The reference continues to disclose that the filtering means is comprised of wood due to its increase in absorptive power (column 10, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro in view of Bigelow to comprise a portion of the filtering means such as the frame from a combustible material such as wood, due to its excellent absorptive power as exemplified by Hashizume.

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12. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claim 37 above, and further in view of Lew et al. (U.S. Patent No. 4,766,321).

Palestro in view of Bigelow is relied upon as set forth in reference to claim 37 above. Palestro in view of Bigelow does not appear to specifically disclose that the inlet filter is fabricated from UV transmissible material. Lew is relied upon as set forth in reference to claim 35. Lew continues to disclose that the inlet filter (6) is made from a UV transmissible material in order to allow the UV radiation to break down degrading particles clogging up the pores of the filter (column 5, lines 59-68). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro in view of Bigelow to comprise the inlet filter from a UV transmissible material in order to allow the UV radiation to break down degrading particles clogging up the pores of the filter as exemplified by Lew.

13. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claim 37 above, and further in view of Hall (International Publication No. WO 02/04036).

Palestro in view of Bigelow is relied upon as set forth in reference to claim 37 above. Palestro in view of Bigelow does not appear to disclose that the upstream, inlet filter means is coated with an antimicrobial substance. Hall discloses an apparatus for cleaning air comprising an inlet and outlet, an upstream inlet filter means (6a), and an UV radiation source (10) as shown in Figure 2. The reference continues to disclose that

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the upstream filter section is coated with an antimicrobial substance in order to enhance the sterilization effects on the air. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro in view of Bigelow to coat the upstream filter section with an antimicrobial substance in order to enhance the sterilization effects on the air as exemplified by Hall.

14. Claims 70 and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro (U.S. Patent No. 6,497,840) in view of Hamilton (U.S. Publication No. 2001/0046461).

Palestro is relied upon as set forth in reference to claim 35 above. Palestro does not appear to disclose that the plurality of light sources comprises a power supply for each pair of UV light sources or that each power supply is tunable to deliver more or less power to the UV light source (concerning claim 73). Palestro also does not appear to disclose that the apparatus further comprises a UV monitoring means arranged to control the or each power supply to increase or decrease the power supplied, thereby ensuring that the UV irradiation within the chamber is monitored and/or kept within tolerable limits. Hamilton discloses an apparatus for the cleaning of fluids. The apparatus comprises a chamber with an inlet and outlet, a filter and a UV light source (paragraphs 2-4 and 72). The apparatus continues to disclose that each UV source comprises a UV sensor (paragraph 61), wherein each sensor, which is arranged to operate under feedback control, ensures correct treatment levels for the fluid by increasing or decreasing the power supplied to the UV source (paragraphs 65 and 66). Therefore, each UV source is supplied with its own power source in order to

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increase/decrease the power to that UV source in accordance with the readings from the sensors. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Palestro to comprise a power supply for each pair of UV light sources in order to provide the ability to increase/decrease the power to each UV light source to ensure correct treatment for the contaminated fluid as exemplified by Hamilton. Concerning claim 75, the limitations are met with respect to claims 73 and 74 above. Therefore, their explanations are relied upon as necessary.

15. Claims 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palestro et al. (U.S. Patent No. 6,497,840) in view of Bigelow (U.S. Patent No. 6,500,387) as applied to claim 37 above, and further in view of Hamilton (U.S. Publication No. 2001/0046461).

Palestro in view of Bigelow is relied upon as set forth in reference to claims 37 and 39 above. Palestro in view of Bigelow does not appear to disclose that the plurality of light sources comprises a power supply for each pair of UV light sources. Hamilton discloses an apparatus for the cleaning of fluids. The apparatus comprising a chamber with an inlet and outlet, a filter and a UV light source (paragraphs 2-4 and 72). The apparatus continues to disclose that each UV source comprises a UV sensor (paragraph 61), wherein each sensor ensures correct treatment levels for the fluid by increasing or decreasing the power supplied to the UV source (paragraphs 65 and 66). Therefore, each UV source is supplied with its own power source in order to increase/decrease the power to that UV source in accordance with the readings from the sensors. Thus, it would have been obvious to one of ordinary skill in the art at the



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time of the invention to modify the apparatus of Palestro in view of Bigelow to comprise a power supply for each pair of UV light sources in order to provide the ability to increase/decrease the power to each UV light source to ensure correct treatment for the contaminated fluid as exemplified by Hamilton.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin C. Joyner whose telephone number is (571) 272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
GLADYS JP CORCORAN  
SUPERVISORY PATENT EXAMINER

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KCJ